

FRUD, G.

Freud, G. Über das Randwertproblem dritter Art der Potentialtheorie. Magyar Tud. Akad. Alkalm. Mat. Int. Közl. 3 (1954), 223-239 (1955). (Hungarian. Russian and German summaries)  
The author gives an explicit formula for the Green's function of the Laplace equation with respect to the third boundary value problem  $T + dT/dn = 0$ , in case of the half plane and half space. With 18 refs. and 1 table. 10 diagrams.  
J. D. L. (New York, N.Y.)

12

Freud

FREUD, G.; BOGNAR, J.

FREUD, G.; BOGNAR, J. Calculation of the quantified energy levels of a dipole rotator in an electric field. p. 239.

Vol. 3, No. 2/1, 1954 (published 1955).

KOZLEMENYEL.

SCIENCE

Budapest, Hungary

So: East European Accession, Vol. 5, No. 5, May 1956

HUNG

Freud, Géza. On a theorem of Paul Erdős and Paul Turán.  
Magyar Tud. Akad. Mat. Fiz. Oszt. Köt. 4, 209-217  
(1954). (Hungarian)  
Hungarian version of a previous paper of the author:  
[Acta Math. Acad. Sci. Hungar. 4, 255-266 (1953); MR  
15, 6203.]

"Convergence of the Hermite-Fejér interpolation processes."  
Acta Mathematica, Budapest, Vol 5, No 1/2, 1954, p. 109

SO: Eastern European Accessions List, Vol 3, No 10, Oct 1954, Lib. of Congress

Freud, G. Restglied eines Tauberschen Satzes. III.  
Acta Math. Acad. Sci. Hungar. 5 (1954), 277-280

For parts I and II see parts I to II of [1].

Let  $f(x)$  be a function defined on  $[0, \infty)$  such that

$f(x) = O(x^\alpha)$  as  $x \rightarrow \infty$ ,  $\alpha < 1$ .

Let  $F(s)$  be the Laplace transform of  $f(x)$ , i.e.,

$F(s) = \int_0^\infty e^{-sx} f(x) dx$  for  $s > 0$ , and let  $F(s)$  exist when  $s > 0$ . Let, as  $s \rightarrow 0+$

$$F(s) \sim A + O(s^\beta)$$

where  $\beta > 0$ . Let, as  $s \rightarrow 0+$

$$F(s) \sim A + O(s^\beta)$$

where  $R(s)$  is increasing over  $s > 0$ ,  $R(s) \rightarrow \infty$  as  $s \rightarrow 0+$ , and  $R(s) \sim s^{-\beta}$  as  $s \rightarrow 0+$ .

Then  $f(x) \sim A$  as  $x \rightarrow \infty$ , and  $f(x) = O(x^\alpha)$  as  $x \rightarrow \infty$ ,  $\alpha < 1$ , is a constant such that as  $x \rightarrow \infty$ .

Thm 6.

$$\int_0^{\infty} e^{-st} d\beta_s(t) = \frac{1}{s} [1 + O(R(s))]$$

and the function  $\gamma_s(t)$  defined by

$$\gamma_s(t) = L\beta_s(t) + \int_0^t u d\tau^s(u)$$

is a monotone increasing function of  $t$ . Then, for each  $n=0, 1, 2, \dots$

$$\int_0^{\infty} (x-t)^n d\tau^s(t) = A \frac{x^n}{n!} [1 + O((\log \frac{1}{x})^{n-1})]$$

as  $x \rightarrow \infty$ . Related theorems and applications to Dirichlet series and power series are given. R. P. Agarwal

7/2

AW

FREUD, G

Freud, G. Über orthogonale Polynome. Acad. Math. Acad. Sci. Hungar. 5, 291-293 (1954). (Russian summary)

1 = F/W

The  $p_n(x)$  are the orthonormal polynomials with respect to a non-negative weight function  $w(x)$  in  $(-1, 1)$ . In an earlier paper [Sano Acta 3, 83-88 (1952); MR 14, 467] the author proved that the corresponding Fourier series of an  $f \in L^2$  (with respect to  $w$ ) is strongly  $(C, 1)$ -summable at almost all points  $x$  where  $(*) \sum_{n=1}^{\infty} p_n^2(x) = O(n)$ . Earlier results point to the (improved) conjecture that  $(*)$  holds for almost all  $x$  where  $w(x) > 0$ . In this direction it is now proved: I. Let  $W(\theta) = w(\cos \theta) \sin \theta$  in  $(0, \pi)$ , and 0 otherwise. If, for small  $h$ ,

$$\int_0^\pi \frac{|W(\theta+h) - W(\theta)|}{W(\theta)} d\theta = O\left(\log^{-\alpha} \frac{1}{|h|}\right) \quad (\alpha > 1),$$

then  $(*)$  holds almost everywhere. II. At almost all zeros of  $w$  one has  $n^{-1} \sum_{k=1}^n p_k^2(x) \rightarrow \infty$ . W. W. Rogosinski.

Freud, Géza. On orthogonal polynomials. Magyar Tud. Akad. Mat. Fiz. Oszt. Közl. 5, 21-27 (1955). (Hungarian)

Hungarian version of the paper reviewed above.

Freud, G. Über das gliedweise Differenzieren einer  
orthogonalen Polynomreihe. Acta Math. Acad. Sci.  
Hungar. 6 (1955), 221-226. (Russian summary)

Let  $p_n(x)$  be the orthonormal polynomials of degree  $n$   
with respect to the non-negative weight function  $w(x)$ ,  $x$  in  $(-1, 1)$ . The following theorem is proved: Suppose that  
 $w(x) > 0$  in  $(a, b)$  where  $-1 < a < b < 1$ . Let  $f(x)$  have  $k$   
continuous derivatives in  $(-1, 1)$  and let  $f^{(k)}(x)$  be the  
modulus of continuity for  $f^{(k)}$ . If  $\sum_{n=1}^{\infty} n^{-1} \omega(1/n; f^{(k)}) < \infty$ ,  
then the  $k$ -times differentiated Fourier series of  $f$  (with  
respect to the  $p_n$ ) is absolutely convergent uniformly in  
every closed subinterval of  $(a, b)$ , and its sum is  $f^{(k)}$ .  
A second theorem of a similar kind is also proved.

W. W. Rogosinski (Newcastle-upon-Tyne)



FREUD, G.

Differentiation of interpolated Lagrange sequences. In German. p. 467.  
Vol. 6, no. 3/4, 1955

so. EAST EUROPEAN ACCESSIONS LIST Vol. 5, no. 7, July 1956

FREUD, G.

HUNG.

437.311.02 1934  
Current Distribution in Cylindrical Conductors  
of Circular Cross-Section.—G. Freud, *Acta tech.  
Acad. Sci. Hungaricae*, 1935, Vol. 1, pp. 397-  
408. In German. A calculation is made of the current  
distribution and Joule heating for the conductor in a  
uniform alternating magnetic field.

FREUD, G.

FREUD, G. - Kozlemenyei - Vol. 5, no. 1, 1955.

Convergence of the Hermite-Fejer interpolation method. p. 29.

SO: Monthly list of East European Accessions, (EEAL), LC, Vol. 4, no. 9, Sept. 1955  
Uncl.

FREUD, G.

FREUD, G. - Kozlomenyei - Vol. 5, no. 1, 1955.

Absolute convergence of orthogonal polynomial series. p. 49.

SO: Monthly list of East European Accessions, (EEAL), LC, Vol. 4, No. 9, Sept. 1955  
Uncl.

FREUD, GÉZA

Freud, Géza. Über einseitige Approximation durch Polynome. I. Acta Sci. Math. Szeged 16, 12-23 (1955).

The following theorem on approximations is proved.

Let  $f(x) = f(x)$ ,  $-1 \leq x \leq 1$ , be differentiable  $n$ -times and

let the integral of a function  $f(x)$  over the interval

$[-1, 1]$  be denoted by  $\int_{-1}^1 f(x) dx$ . Then we have the following

theorem:

$$\left| \int_{-1}^1 f(x) dx - \int_{-1}^1 P_n(x) dx \right| \leq A_n \max_{-1 \leq x \leq 1} |f^{(n)}(x)|$$

Here  $A_n$  depends only on  $n$ . This result is used in order to estimate the error (1) in certain mechanical quadrature formulas (2) in a Tauberian formula for Laplace transforms

SUBJECT USSR/MATHEMATICS/Theory of approximations CARD 1/2 PG - 55  
 AUTHOR FREUD G.  
 TITLE One-sided  $L_1$ -approximations and their application to theorems  
 of Tauber's type.  
 PERIODICAL Doklady Akad. Nauk 102, 689-691 (1955)  
 reviewed 6/1956

The author proves the theorem: If  $f(x)$  is  $m-1$  times differentiable on  $(a,b)$ , then there exist polynomials of  $n$ -th degree  $p_n(x)$  and  $P_n(x)$  which satisfy the following conditions:

$$p_n(x) \leq f(x) \leq P_n(x) \quad a \leq x \leq b$$

$$\int_a^b [P_n(x) - p_n(x)] \frac{dx}{\sqrt{(b-x)(x-a)}} = O\left(\frac{1}{n^{m+1}}\right).$$

For the proof the classical polynomials of Markov and Stieltjes and the Chebyšev's quadrature in terms of abscissas is used. From results of Bernstein the author concludes without proof (with a hint to Karamat's proof of the Littlewood's theorem) the second theorem: Let  $F(t)$  be not decreasing and defined on  $(0, \infty)$  and let the Laplace-Stieltjes transformation

Doklady Akad. Nauk 102, 689-691 (1955)

CARD 2/2

PG - 55

$$F(s) = A \frac{\Gamma(\alpha+1)}{s^\alpha} [1 + O\{R(s)\}]$$

converge for  $\operatorname{Re} s > 0$ . Let be  $\alpha \geq \frac{1}{2}$ . If  $s$  tends to zero (remaining real), then

$$F(s) = A \frac{\Gamma(\alpha+1)}{s^\alpha} [1 + O\{R(s)\}].$$

Here  $R(s)$  is a monotonely decreasing function,  $R(0) = 0$  and

$$R(k_s) < e^{c_3^k} R(s) \quad k=2,3,\dots$$

Then the function  $f$  being  $m-1$  times differentiable on  $(0,1)$  satisfies the condition

$$\int_0^\infty f\left(e^{-\frac{t}{x}}\right) \cdot e^{-\frac{t}{x}} dF(t) = Ax^\alpha \left[ \int_0^1 \left(\log \frac{1}{y}\right)^{\alpha-1} f(x) dx + O\left\{ \left[ \log \frac{1}{R(1/x)} \right]^{-m-1} \right\} \right].$$

INSTITUTION: Inst. of applied Math. of the Acad. of Sciences of Hungary, Budapest.

HUNGARY/Atomic and Molecular Physics - Heat

D-6

Abs Jour : Ref Zhur - Fizika, No 4, 1959, No 5460

Author : Adler Gyorgy, Fraud Geza

Inst : -

Title : On the Principle of Maximum for the Differential Equation of Heat Conduction. I.

Orig Pub : Magyar tud. akad. Mat. kutato int. kozl., 1956, 1, No 1-2,  
157-165

Abstract : The authors consider a case in which part of the boundary of the body that conducts the heat, is thermally insulated. It is proven that the maximum (or minimum) of the temperature cannot be reached on the insulated portion of the boundary, with the exception, perhaps, of the initial instant of time.

Card : 1/1

24



Freud, G.; und Králík, D. Über die Anwendbarkeit des  
Dirichletschen Prinzips für den Kreis.  
Acad. Sci. Hungar. 7 (1950), 411-412. (Russian sum-  
mary)

This paper contains a discussion of the relation to each other of certain previously known conditions for the applicability of Dirichlet's principle to the solution of the Dirichlet problem for the circle. Some refinements of these conditions are also given. Among the previous conditions involved is that due to R. Courant, in terms of the Fourier coefficients of the boundary value function [Dirichlet's principle, conformal mapping and minimal surfaces, Interscience, New York, 1950; MR 12, 90]. Other results cited include those due to S. M. Nikol'skii [Mat. Sb. N.S. 35(77) (1954), 247-266; MR 16, 589], and L. N. Slobodeckii and V. M. Babits [Dokl. Akad. Nauk SSSR (N.S.) 106 (1956), 604-606; MR 17, 959].

F. W. Perkins (Hanover, N.H.)

FREUD, G.

Displacement current generating in a circular cross-section  
conductor. P. 7 KOZLEMENYEI Budapest, Vol. 18, no. 1/4,  
1956

SOURCE: East European Accessions List (EEAL) Library of Congress  
Vol. 5, no. 8, August 1956

5341:

2-F/W

Freud, Géza. Eine Eigenschaft der Lösungen parabolischer Differentialgleichungen. C. R. Acad. Bulgare Sci. 10 (1957), 451-452. (Russian summary)

Let  $u(x, t)$  for  $0 < t \leq T$ ,  $0 < x < l$  be a solution of the parabolic differential equation

$$\partial^2 u / \partial x^2 + c(x, t) \partial u / \partial x = a(x, t) \partial u / \partial t,$$

where  $a(x, t)$  is a positive function and  $u(x, t)$  is continuous in the closed region  $0 \leq t \leq T$ ,  $0 \leq x \leq l$ . The author establishes the following theorem:

Let  $u(x, 0)$ ,  $0 \leq x \leq l$  and  $u(t, l)$ ,  $0 \leq t \leq T$ , be monotone non-decreasing and let  $u(t, 0)$ ,  $0 \leq t \leq T$  be monotone non-increasing. Then  $u(x, t)$ , for arbitrary  $t$ ,  $0 < t < T$ , is a monotone non-decreasing function of  $x$ .

From the author's summary

FREUD, G.

Remark on the theorems of Cantor and Bendixson. In German. p. 333.

ACTA MATHEMATICA. (Magyar Tudományos Akadémia) Budapest, Hungary. Vol. 9,  
no. 3/4, 1958.

Monthly list of East European Accessions, (EEAI) LC, Vol. 9, no. 1, Jan. 1960.

Uncl.

FREUD, G.

Remark on the convergence of an interpolation process of P. Turan. In German. p. 337.

ACTA MATHEMATICA. (Magyar Tudományos Akadémia) Budapest, Hungary. Vol. 9, no. 3/4, 1958.

Monthly list of East European Accessions, (EEAI) LC, Vol. 9, no. 1, Jan. 1960.

Uncl.

ADLER, G.; FREUD, G.

Application of Mikusinski's calculations in the solution of an equation  
in partial derivation. Mat kut kozl MTA 4 no.3/4:367-375 '59.

(EEAI 9:9)

(Differential equations)

FREUD, Geza

Contribution to the positive Zygmund's series of approximation.  
Mat kut kozl MTA 6 no.1/2:71-75 '61.

(Series) (Approximate computation)

S/044/62/000/010/003/042  
B112/B102

AUTHOR: Freud, G., Sallay, M.

TITLE: Rate of convergence of expansion with respect to Sturm-Liouville eigenfunctions

PERIODICAL: Referativnyy zhurnal. Matematika, no. 10, 1962, 37, abstract-10B158 (Magyar tud. akad. Mat. kutató int. közl., v. 6, no. 3, 1961, 271 - 279 [French; summary in Rus.])

TEXT: Let  $v_n(x)$  be the standard eigenfunctions of the differential equation  $y'' + [\lambda - q(x)]y = 0$ , which satisfy the conditions

$$\begin{aligned}\alpha_1 y(0) + \beta_1 y'(0) &= 0, \\ \alpha_2 y(\pi) + \beta_2 y'(\pi) &= 0,\end{aligned}\tag{1}$$

$$S_n(x; f) = \sum_{k=0}^n a_k v_k(x), \quad a_k = \int_0^\pi f(x) v_k(x) dx.$$

Card 1/2



FREUD, Geza, a matematikai tudományok doktora

Gyorgy Alexits' Convergence Problems of Orthogonal Series; a book  
review. Mat kozl MTA 11 no.1:121-124 '61. (EEAI 10:6)  
(Alexits, Gyorgy) (Convergence) (Series)

FREUD, G.

On the  $(C,1)$ -sums expanded according to orthogonal polynomials.  
Acta mat Hung 14 no.1/2:197-208 '63.

1. Mathematisches Forschungsinstitut der Ungarischen Akademie  
der Wissenschaften, Budapest. Vorgelegt von Gyorgy Alexits.

FREUD, G. (Budapest); KNAPOWSKI, S. (Poznan)

On linear processes of approximation, Pt. I. Studia math 23  
no. 2: 105-112 '63.

FREUD, Geza

Approximation theorems of M.H. Stone. Mat lapok 15 no.1/3:  
169-178 '64

FREUD, Gáza

Contribution to the equivalence in the solution of the  
Hamburger-Stieltjes moment problems. Mat Kut kozl MTA  
9 Series A no.1/2:117-123 '64.

1. Editorial Board Member, "A Magyar Tudományos Akademia  
Matematikai Kutató Intézetének Közleményei."

FREUD, G. (Budapest); KNAPOWSKI, S. (Poznan)

On linear processes of approximation. Pt.2. Studia math  
25 no.2:251-263 '65.

1. Submitted May 25, 1964.

*FREUD, K.*

PHASE I BOOK EXPLOITATION

SOV/5975

International Institute of Welding

XII kongress Mezhdunarodnogo instituta svardi, 29 iyunya - 5 iyulya 1959 v g.  
Opatii (Twelfth Annual Assembly of the International Institute of Welding,  
Opatija, June 29 - July 5, 1959) Moscow, Mashgiz, 1961. 359 p. 3000  
copies printed.

Sponsoring Agency: Natsional'nyy komitet SSSR po svarke.

Ed. (Title page): G. A. Maslov, Docent; Translated from English, French,  
and Serbo-Croatian by N. S. Aborenkova, K. N. Belyayev, E. P. Bogacheva,  
L. A. Borisova, K. V. Zvegintseva, V. S. Minavichev, and M. M. Shelechnik;  
Managing Ed. for Literature on the Hot-Working of Metals: S. Ya. Golovin,  
Engineer.

PURPOSE: This collection of articles is intended for welding specialists and  
the technical personnel of various production and repair shops.

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SOV/5975

Twelfth Annual Assembly (Cont.)

COVERAGE: The collection contains abridged reports presented and discussed at the Twelfth Annual Assembly of the International Institute of Welding. Reports deal with problems of welding and related processes used in repair work, repair techniques, and the problems arising in connection with the nature of the base and filler materials. Examples of repairing various parts are given, and the organization of repair operations in workshops and under field conditions is discussed. Economic aspects of welding and related processes as used in repair work are analyzed. No personalities are mentioned. There are no references.

TABLE OF CONTENTS: [Only Soviet and Soviet-bloc reports are given here]

Foreword

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PART I. THE STUDY OF REPAIR-WORK TECHNIQUES  
(PROCESSES, METHODS, PREPARATION, HEATING, AND  
OTHER TYPES OF PROCESSING CONTROL)

Myuntsner, L. (Czechoslovakia). Welding of Broken Crankshafts

36

Card 2/9



Twelfth Annual Assembly (Cont.)

SOV/3975

Khel'bich, R. (Czechoslovakia). Repairing High-Pressure  
Reactors and Regenerators by Welding 297

Mokanu, R., I. Antonescu, and K. Freud (Rumania). Examples  
of Welding Jobs Involved in the Repair Work at Rumanian Railroads 311

PART IV. ORGANIZATION OF REPAIR AND MAINTENANCE OF  
EQUIPMENT AND METAL STRUCTURES AT WORKSHOPS AND UNDER  
FIELD CONDITIONS AS CARRIED OUT IN VARIOUS BRANCHES OF INDUSTRY

[Part IV contains no Soviet or Soviet-bloc reports]

PART V. ECONOMIC ASPECTS OF USING WELDING AND RELATED  
PROCESSES IN REPAIR WORK

[Part V contains no Soviet or Soviet-bloc reports]

Card 6/9

167950

S/264/62/000/009/001/006  
I007/I207

AUTHOR: Freudenthal, A.M.

TITLE: Reliability analysis of fatigue-sensitive structures

PERIODICAL: Referativnyy zhurnal, vozdushnyy transport, svodnyy  
tom, no.9, 1962, 7-8, abstract 9A37 (Acta techn.  
Acad. scient. hung.), 1961, 35-36; 55-81 [English] ✓

TEXT: The problem studied is the operational reliability of aircraft structures from the point of view of static and fatigue strength. Until recently, these two conditions were considered separately which however is unpractical since, when aloft, aircraft structures are subject to static failure as a result of cyclic stresses and loads affecting their static strength. Typical stress patterns are plotted under normal

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S/264 62/000/009/001/006  
I007/I207

Reliability analysis...

operation conditions; these patterns are used for checking the fatigue strength. On the other hand, the stress pattern under unfavorable operation conditions are used for selecting the rated static loads. The following factors affecting the endurance limit of structures, are considered: stress pattern; characteristics of fatigue strength of the materials involved; peculiarities of materials, structural elements and joints; the influence of residual stresses, of fretting and corrosion; temperature and environmental factors etc. The following *ratio* is assumed as the basic strength characteristics  $r_p(N)/r_u(N)$  where  $r_p(N)$  = probability of fatigue failure of structures under the action of  $N$  load cycles;  $r_u(N)$  = probability of static failure under same conditions: Assuming  $N = N^+$ , where  $N^+$  = number of repeated load

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53264/62/000/009/001/006  
I007/I207

Reliability analysis ....

cycles, corresponding to the rated fatigue strength (endurance limit) of the structures, it follows that  $f(N^+) = f^+$ . In dependence on the value of  $f^+$ , aircraft structures may be divided into four groups: a). fatigue-insensitive with  $0 < f^+ \leq 0.1$  —; b). moderately fatigue-sensitive with  $0.1 < f^+ \leq 1.0$  —; c). very fatigue-sensitive with  $1.0 < f^+ \leq 10$  —; d). extremely fatigue-sensitive with  $10 < f^+$ . Structures of the first group should preferably be tested for static strength only. Structures of the second group should be designed for fatigue strength. Field tests of such structures should be carried out for static loads, while their component elements and joints should also be tested for cyclic (repeated) loads with an amplitude equal to the value of maximum static operational load (in order to reduce test duration). Structures of the third group should be designed and tested for cyclic loads; at

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S/264/62/000/009/001/006  
I007/I207

Reliability analysis....

least one full-scale structure (of this group) should be subject to typical cyclic loads test; fatigue-resistance tests of structural elements and joints should furnish data permitting the minimum service-life of such structures to be calculated. Structures of the fourth group, if there is no possibility that may be dispensed with, should be designed and tested for cyclic loads only; a sufficient number of full-scale structures of this group should be tested to obtain reliable values of the average endurance limit and characteristics of stray test results. Methods are described for determining  $f^+$ , and a relationship is established between the value of  $f^+$  and the safety factor with respect to the reliable fatigue strength, the maximum operational load, and the amplitude of cyclic loads at which tests are carried out. A graph is plotted for determining the root mean-square deviation of the logarithm of

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S/264/62/000/009/001/006  
I007/I207

Reliability analysis....

average value of dangerous-cycle number; this graph is plotted from the results of fatigue tests with constant amplitude of load stresses, the result of programmed fatigue tests and of tests with random alternating stresses. The method suggested may be used for the qualitative evaluation of operational reliability of various aircraft structures, rather than for any quantitative calculations. ✓/A

[Abstracter's note: Complete translation.]

Card 5/5

FR. LI. V.; VANCS, E.

PREUD, P.; VANCS, E. Microviscometer. p. 11.

Vol. 11, No. 1, Jan. 1956.

MAGYAR KEMIKUSOK IAPJA.

TECHNOLOGY

Budapest, Hungary

So: East European Accession, Vol. 5, No. 5, May 1956

L 59573-65 EWT(1)/EWP(w)/EWA(d)/T/EWP(t)/EWP(b) IJP(c) JD/GG

ACCESSION NR: AT5009438

CZ/ 0000/64/000/000/0066/0070

AUTHOR: Makiej, B.; Freud, R.; Sulkowski, C.

TITLE: Change in magnetic induction distribution with temperature in a cylindrical specimen at destruction of superconductivity by current

SOURCE: Conference on Low Temperature Physics and Techniques. 3d, Prague, 1963. *44 36 21*  
Physics and techniques of low temperatures; proceedings of the conference. Prague, Publ. House of the Czechosl. Academy of Sciences, 1964, 66-10

TOPIC TAGS: superconductivity, magnetic induction distribution, superconductivity destruction, low temperature research, superconducting transition

ABSTRACT: This is a sequel of an investigation by one of the authors (Makiej, ZhETF v. 34 (1958) 312) and is aimed at a closer examination of the inconsistency between the earlier experimental data and the London theory of destruction of superconductivity by a current. To this end, the distribution of magnetic induction was determined in a specimen at fixed current of 25.8 A and at several specimen temperatures. The experimental set-up was the same as described in the earlier paper. The specimen was a polycrystalline tin cylinder 4 mm in diameter, of resistivity ratio  $R_{4.2}/R_{293} = 1.56 \times 10^{-4}$  with a 0.2 x 3.5 mm rectangular slot cut in the central part of the cylinder, symmetrical about the diametral plane. The magnetic

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ACCESSION NR: AT5009438

field in the slot was measured with a magnetoresistance bismuth probe. Comparison of the measurements with the calculations based on London's theory shows that an increase in temperature is accompanied by a decrease in the radius of the "core" of the intermediate state, and the experimental points in the "sheath-core" border region do not lie on the theoretical curve. This discrepancy cannot result from the difference between the temperature of the sample and that of the surrounding helium bath. It is therefore concluded that there is no sharp border between the regions of the intermediate and normal state, and any phenomenological theory ignoring the actual structure of the intermediate state does not describe well the mechanism of destruction of superconductivity by current. "The authors thank Doctor Z. Rojnar and Doctor J. Szymaszek for helpful discussions, Doctor W. Gariat for supplying the zonally purified tin, and to Mr. J. Kasprzak and Mr. M. Wasilewski for technical assistance." (Orig. art. has: 6 figures and 2 formulas.

ASSOCIATION: Department of Low Temperatures, Institute of Physics, Polish Academy of Sciences, Wrocław, Poland

SUBMITTED: 0000054

ENCL: 00

SUB CODE: EM, TD

NR REF SOV: 003

OTHER: 001

Card 2/2

FREUND, I.L. (Chekhoslovakiya)

Cages made by various materials for laboratory mice. Lab. delo 6  
no.5:55-57 S-0 '60. (MIRA 13:9)

(LABORATORY ANIMALS)



FREUND, J.L.; HOUSKA, F.

Report on the Second Czechoslovak Work Conference on Experimental  
Animals. Term tud kozl 5 no.2:91-92 F '61.

FREUD, I.L.; FREUNDOVA, D. (Praga)

"Rat and mouse - experimental animals for research" by E.Hagemann  
and G.Schmidt. Reviewed by I.L.Freund and D.Freundova. Lab. delo  
7 no.12:51 D '61. (MIRA 14:11)  
(LABORATORY ANIMALS) (HAGEMANN, R.) (SCHMIDT, G.)



FREUND, K.; SRNEC, J.

Experience with male homosexuality; analysis of changes in sexual  
appetence in experimental. Sborn. lek. 55 no.5-6 125-182 May 1953.  
(CIML 25:1)

1. Experimental therapy with conditioned reflexes.

EXCERPTA MEDICA Sec 8 Vol 9/8 Neurology Aug 56

3592. EREUND K. and SRNEC J. Psychiat. Klin. Karlovy Univ., Praha. \*K problematice poruchy paměti způsobené elektrošoky. On the problem of memory disturbance due to electroshocks NEURCL. PSYCHIAT. ČSL. 1955, 18/1 (19-25) Tables 3  
ECT mainly disturbs the registration ability and thus causes Korsakov's amnesic syndrome in various nosology units.  
Hadlík - Olomouc



EXCERPTA MEDICA Sec 8 Vol 9/9 Neurology Sept '56

3975. FREUND K. and SRNEC J. Psychiat. Klin., Karls-Univ., Prag. \*Zum Problem der allgemeinen Merkschwäche, ein Modellversuch. The problem of general weakness of memory; a model MSCHR. PSYCHIAT. NEUROL. 1956, 131/4 (226-247) Tables 6 Illus. 5

The question of the relationship of weakness of memory with 'passivity', 'inhibition' and 'apathy' in any given patient, can be answered so far as such a relationship does exist, and that weakness of memory does depend, at least in part, on lack of spontaneity in reproduction, which is shown by the patient with psychomotor inhibition. The relationship is, however, of too lowly an order for a general weakness of memory to be ascribed wholly or principally to the 'passivity' or the 'apathy' of the subject.

Authors' summary

FREUND, Kurt

Diagnosis of male homosexuality. Cesk. psychiat. 53 no.6:382-394 Dec 57.

1. Psychiatricka klinika KU v Praze.

(HOMOSEXUALITY, diag.

in males (Cz))

FREUND, K.; DIAMANT, J.; PINKAVA, V.

On the validity & reliability of the phalloplethysmographic (Pmp) diagnosis of some sexual deviations. Rev. Czech. M. 4 no.2:145-151 1958.

1. Clinic of Psychiatry Charles' University, Prague. Acting Director:  
Prof. V. Vondracek.

(SEXUAL DEVIATIONS, diag.

penile plethysmography, diag. value)

(PLETHYSMOGRAPHY, in various dis.

penile in sexual deviations, diag. value)

(PENIS, blood supply,

plethysmography in diag. of sexual deviations)

ENCERETA MEDICA Sec 8 Vol 12/11 Neurology Nov 59

5890. THE PROBLEM OF THE TREATMENT OF HOMOSEXUALITY - Sobre el problema del tratamiento de la homosexualidad - Freund K. Clín. Psiquiat. Karls-Univ., Prague - ACTA NEUROPSYCHIAT. ARGENT. 1958. 4/3 (233-247) Tables 4

Between the cases of heterosexual adaptation which were observed after a non-exploratory, predominantly non-verbal psycho-therapeutic procedure, and those adaptations which have been reported by psychotherapists, there are no significant qualitative or quantitative differences. It is likely that all measures regarded as efficacious in cases of homosexuality are based on the same principle: a system of abstention from the homosexual habits in an atmosphere favouring heterosexual behaviour. The most that can be attained with psychotherapy is a change in the patient's social habits; his erotic orientation can be influenced only very slightly or not at all.

FREUND, K.

Three comments on the work of a psychopathologist. Cesk. psychiat. 54  
no.3:177-183 June 58.

1. Vyzkumna laborator psychiatricke katedry KU v Praze.  
(PSYCHOPATHOLOGY,  
(Cz))

EXCERPTA MEDICA Sec 8 Vol 12/7 Neurology July 59

3372. REVIEWS ON THE VALIDITY AND RELIABILITY OF THE PHALLO-  
PLETHYSMOGRAPHIC (PHP) DIAGNOSIS OF SOME SEXUAL DEVIATIONS -  
Freund K., Diamant J. and Pinkava V. Clin. of Psychiat.,  
Charles Univ., Prague - REV. CZECH. MED. 1958, 4/2 (145-151) Tables 4

The authors planned to test the validity and reliability of an objective method of  
diagnosing sexual deviations, by comparing the case histories with the Php tracings  
of the subjects, on exhibiting them the coloured, life-size, static, male and fe-  
male nude figures of age ranging from 4 to 30, for 13 sec. each with a gap of 19  
sec. in between.

Raychaudhuri - Calcutta

EXCERPTA MEDICA Sec 8 Vol 12/9 Neurology Sept 59

4774. SEDUCTION AS A CAUSE OF HOMOSEXUALITY - Zur Frage der Ver-  
führung zur Homosexualität - Freund K. and Pinkava V. Forsch.-  
Abt., Ambulanz für Sex. Deviationen, Psychiat. Klin., Karls-Univ., Prag -  
NERVENARZT. 1958, 29/8 (364-366) Graphs 2 Tables 4

The widely spread opinion that homosexuality is usually the result of seduction in  
youth was tested in 222 cases from the Prague Psychiatric Clinic. Those cases in  
which homo-erotic contact had been made with a man at least 5 yr. older were re-  
garded as being based on seduction. These conditions were present in only 13  
cases, which shows that seduction of children or juvenile persons is not a very

NEDOMA, Karel; FREUND, Kurt

The problem of responsibility and corrective measures in sexual delinquents. Cesk. psychiat. 55 no.4:264-269 June 59.

1. Sexuologický ústav KU v Psychiatricka klinika KUV Praze.  
(SEX DEVIATION)



PREUND, Kurt; PINKAVA, Vaclav

On the relationship between homosexuality and parental absences.  
Gesk. psychiat. 55 no.5:334-336 0 '59.

1. Psychiatricka klinika KU v Praze.  
(HOMOSEXUALITY)  
(PARENT CHILD RELATIONS)

FREUND, Kurt; PINKAVA, Vaclav

On the problem of age preference of male homosexuals. Cesk.psy-  
chiat. 55 no.6:362-367 D '59.

1. Psychiatricka klinika Karlovy university v Praze.  
(HOMOSEXUALITY)

FREUND, Kurt; PINKAVA, Vaclav

On the problem of "femininity" in male homosexuals. Cesk.psychiat.  
56 no.6:386-394 D '60.

1. Psychiatricka klinika KU v Praze.  
(HOMOSEXUALISM)

FREUND, K.

Laboratory differential diagnosis of homo- and heterosexuality -  
an experiment with faking. Rev.Czech.M. 7 no.1:20-31 ' 61.

1. Psychiatric Hospital Charles University, Prague. Director:  
Prof. V.Vondracek, M.D.  
(HOMOSEXUALITY diag)

FREUND, K.; PINKAVA, V.

Homosexuality in man and its association with parental relationships. Rev.Czech.M. 7 no.1:32-40 '61.

1. Psychiatric Hospital of Charles University, Prague. Director:  
Prof. MUDr. V. Vondracek.

(HOMOSEXUALITY psychol)  
(PARENT CHILD RELATIONS)

NEDOMA, Karel; FREUND, Kurt

Somatosexual findings in homosexual males. Cesk. psychiat. 57  
no.2:100-103 '61.

1. Sexualogicky ustav a psychiatricka klinika KU v Praze.  
(SOMATOTYPES) (HOMOSEXUALITY)

FREUND, Kurt

Femininity in the homosexual male and his parental relations.  
Cesk. psychiat. 57 no.3:170-174 '61.

1. Psychiatricka klinika KU v Praze.  
(HOMOSEXUALITY psychol.) (PARENT-CHILD RELATIONS)

FREUND, K.; NEDOMA, K.; PINKAVA, V.

2 types of picture of homosexuality in men. Cesk. psychiat. 57 no.4:  
230-232 1961.

1. Psychiatricka klinika a Sexuologicky ustav KU v Praze.  
(HOMOSEXUALITY)



FREUND, K.

CZECHOSLOVAKIA

Docent MD

Not Given

Prague, Prakticky Lekar, No. 18, 1962, p 813

"Fiftieth Anniversary of Docent MUDr Jiri Roubicek"

CZECHOSLOVAKIA

J. MADLAFOUSEK and K. FREUND, Psychiatry Research Institute (Vyzkumny ustav psychiatricky), Prague.

"Realistic Animal Models."

Prague, Ceskoslovenska Psychiatric, Vol 58, No 6, 1962; pp 369-371.

Abstract: Animal research has changed vastly since the end of the early post-war period, with much development in humoral, biochemical, social and stereotactic studies and experiments. These and future trends are discussed abstractly. No references.

CZECHOSLOVAKIA

K. FREUND, Psychiatry Research Institute (Vyzkumny ustav psychiatricky) Prague.

"Concluding Remarks."

Prague, Ceskoslovenska Psychiatric, Vol 58, No 6, 1962; pp 375-376.

Abstract: Discussion of the preceding three articles, all on various aspects of research in psychiatry. Extensive and intensive research in psychiatry each have their own set of rigid rules; experimental animal models must be predicated on conformity to known facts; new orientations in psychiatric research are, however, also needed.

FREUND, K.

Final considerations. Cesk. psychiat. 58 no.6:375-376 D '62.

1. Vyzkumny ustav psychiatricky v Praze.  
(PSYCHIATRY)

CZECHOSLOVAKIAN

FREUD, K., Psychiatry Research Institute (Vyzkumny ustav psychiatricky),  
Prague 8 - Bohnice.

"The Concept of Psychopathy"

Prague, Ceskoslovenska Psychiatrie, Vol LIX, No 4, August 63, pp 246-247.

Abstract: Using various references the author makes an attempt to define psychopathy. He argues a difference should be made between neurotic disturbances during development and psychopathies. Ten references, including 2 Russians.

1/1

FREUND, K.

On the concept of psychopathy. Cesk. psychiat. 59 no.4:246-247  
Ag '63.

1. Vyzkumny ustav psychiatricky v Praze 8 -- Bohnicich.  
(PSYCHOPATHOLOGY) (NOMENCLATURE)

FREUND, K.

On the problem of male homosexuality. Rev. ex. e. vol. 11, no. 12  
11-17 '65

1. Psychiatric Research Institute, Prague.

FREUND, K.

a simple device for measuring volume changes of the male genital organ. Cesk. psychiat. 61 no.3:164-166 Je '65.

1. Vyzkumny ustav psychiatricky v Praze.

L 10726-66

ACC NR: AP6004563

SOURCE CODE: CZ/0083/65/000/003/0164/0168

AUTHOR: Freund, K.--Freynd, K. (Prague)

ORG: Psychiatric Research Institute, Prague (Vyzkumny ustav psychiatricky)

TITLE: Simple device for measuring volume changes of the penis

SOURCE: Ceskoslovenska psychiatrie, no. 3, 1965, 164-168

TOPIC TAGS: human physiology, medical laboratory instrument

ABSTRACT: A device allowing accurate measurements of volume changes of the male genital organ was designed by the author and used in erotic preference tests. Pictures are projected at 7 second intervals, and volume changes of the penis are automatically recorded. The range of the device is 0.035 to 8 cubic centimeters. Complete details of the construction of the apparatus are given. Orig. art. has: 2 figures. [JPRS]

SUB CODE: 06 / SUBM DATE: none / ORIG REF: C07

SC  
Card 1/1



FRANCO, R.

"A Bibliography Of The Anoplura Or Suckling Lice." p. 1. (Shornika  
Acta Entomologica. Vol. 36, No. 367, 1948-50, Praha.)

SO: Monthly List of East European Accessions, Vol. 3, No. 3.  
Library of Congress, March 1954, Incl.

FREUND, Ladislav, sanitetski potpukovnik, dr.; MADIRACA, Ante,  
sanitetski potpukovnik, dr.

Attempted therapy of dyspnea and asphyxia following acute  
edema of the larynx. Vojnosanit. pregl. 19 no.4:293-297  
Ap '62.

1. Medicinski centar ratne mornarice u Splitu, Odjel za bolesti  
uha, nosa i grla.  
(DYSPNEA) (ASPHYXIA) (LARYNGEAL EDEMA)

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1ST AND 2ND GROUPS																									
PROCESSES AND PROPERTIES													TESTS												
<p><i>ca</i></p> <p>Raw materials and production of mineral lubricating oils. M. FREUND. <i>Magyar Mérnök Épitészeti Közlönye Havi Füzete</i> 8, 1-10(1931).—A general description of present production methods. S. S. DE FINÁLY</p> <p><i>32</i></p> <p>Principles of chemical investigation of mineral lubricating oils. M. FREUND. <i>Magyar Mérnök Épitészeti Közlönye Havi Füzete</i> 8, 18-25(1931).—A general description of research methods. S. S. DE FINÁLY</p>																									
<p>ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION</p>																									

Lubricating oils. Mihaly E. and Istvan E. Hung. 117,182, (Oct. 16, 1967). Fatty oils (e. g., olive, cottonseed) are blown with air to increase their viscosity, then mineral oils and 1-2% antioxidant are added. Di-benzyl-*p*-aminophenol or *p,p'*-diaminodiphenylamine is a suitable antioxidant.

ASB 55.8 METALLURGICAL LITERATURE CLASSIFICATION

1967-1968

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The characteristics of natural and artificial mineral lubricating oils with low specific gravities. Mihaly Freund. *Magyar Művelődési Közlöny* 71, 356-9 (1957).—In comparing mineral lubricating oils of different origins and proced. or refined by different methods but having the same viscosity at 50° or other temp., the following regularities were obtained: The ay. to p. apparent mol. wt. and H content of the oils diminish with increase in sp. gr. The temp. viscosity curves, however, become progressively more abrupt. These results could probably be applied to the evaluation of lubricating oils of the same viscosity. The detn. of the sp. gr. would be enough to draw some practical conclusions.

S. S. de F.

ATA 15.4. METALLURGICAL LITERATURE CLASSIFICATION

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CA

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES MODE

1ST AND 2ND ORDERS

22

Newest methods of the petroleum-working industries.  
Mihály Freund. *Technikus Kőr* 9, 47-52 (1938).—The  
newest methods applied in American, German and Russian  
factories are discussed in detail. S. S. de Finály

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

FROM SYNOPTIC

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CA

22

The use and serviceability of mineral oil vegetable oil mixtures as motor lubricants. Istvan Ihamu, M. Freund

and J. Nyul. *Congr. intern. tech. chim. ind. agr., Compt. rend., VI<sup>e</sup> congr., Budapest 2, 315-40 (1939); Chem. Zentr. 1940, I, 4011.*—The characteristics which are demanded of a vegetable or a mixed lubricating oil for various purposes (lubrication of bearings, lubrication of internal combustion motors) and those which are to be expected of vegetable oils are discussed. Tests of viscosity, and no. Contradon no. aging, etc., and tests in motor operation were made on rapeseed oil and castor oil and various mixts. of these oils with a series of mineral oils of varying compn. characteristics of which are reported. Neither of the vegetable oils can be satisfactorily used in the pure, unmixed condition. Mixts. contg. 30% vegetable oil could be used in motors with carburetors for limited periods of operation up to about 60 hrs. Use for longer periods is questionable. The residues left in the motor (soot, etc.) were different in kind and larger in amt. than those left by mineral oils. The residues produced by vegetable oils were hard and shiny and detrimental to the motor. Moreover, sepn. of the components of the oil mixts. was found to be possible; causes for such sepn. appeared to be in the operating conditions of the motor. When used as an admixt. rapeseed oil appeared to be no less satisfactory than the mineral oil-oil, castor oils. Correctly chosen inhibitors should greatly increase the usefulness of the vegetable oils. Unexpectedly large differences were obtained with carburetor mixtures of different design. M. G. Moore

454 554 DETAIL OF LITERATURE CLASSIFICATION

The fabrication of glass stopcocks in laboratory apparatus.  
M. F. Parnes, Congr., Intern. Tech. Chiss. Ind. Agr.,  
Compd. 1906, VI, Congr., Budapest 3, 712(11830); Chem.  
Zentr. 1906, I, 64.—A very viscous cylinder oil, such as is  
used in steam engines, is recommended. M. G. Moore

A16-5LA METALLURGICAL LITERATURE CLASSIFICATION

COMMON ELEMENTS COMMON VALUABLE METALS

MATERIALS INDEX

SUBJECT INDEX

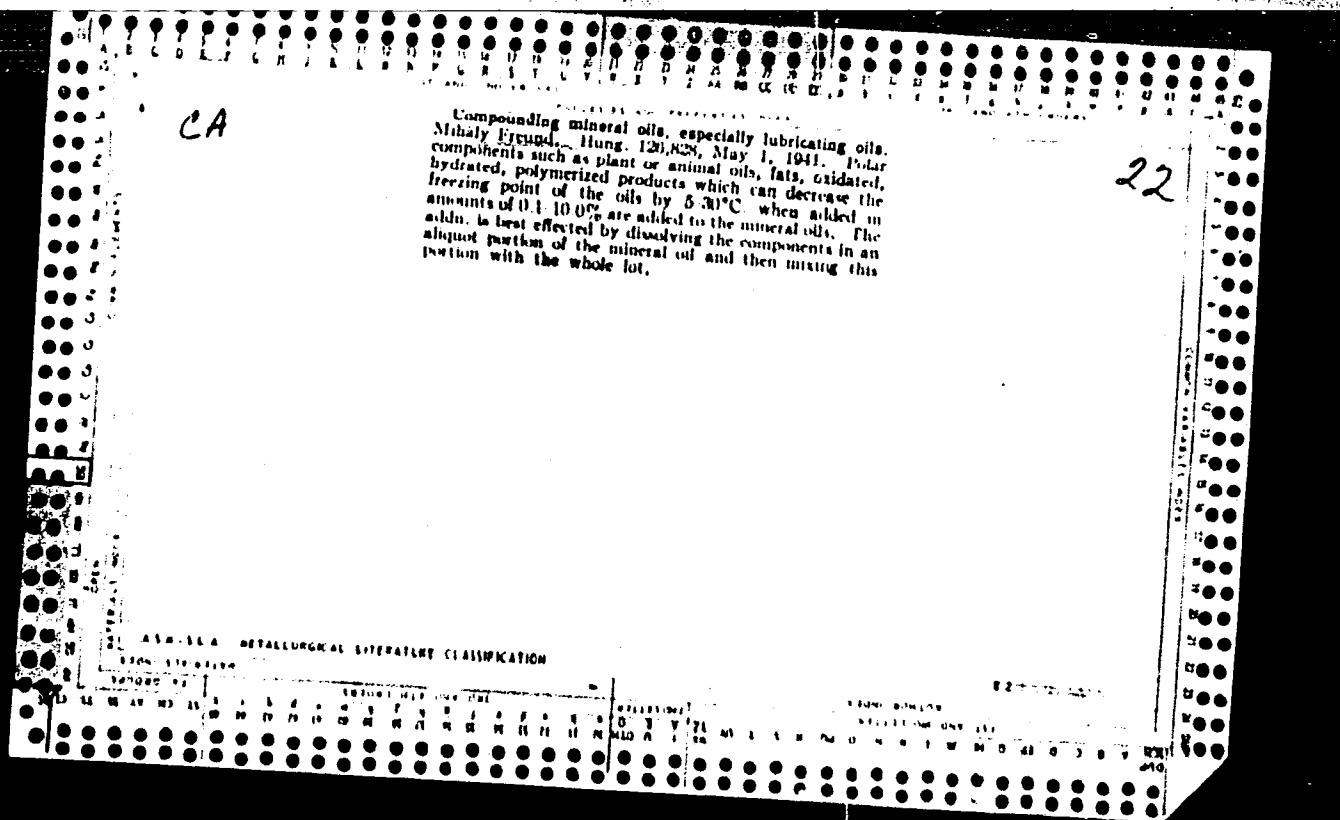


Stabilized vegetable oils in the lubrication of internal-combustion engines. Mihály Freund and István Thamm. *Magyar Mérnök-Epítőszaki Közlemények* 73, 222-61 (1930).

—In lab. oxidation tests, 12 samples were simultaneously treated in a specially constructed app. in oil bath heated to 200° with continual mixing. For 5 hrs. O was led through at the rate of 2 bubbles per sec. Rape oil was tested alone and with 0.5% of the following oxidation inhibitors: pyrogallol, 1,8-dihydroxynaphthalene, o-ethoxyphenol, o-aminophenol, dinaphthyl-p-phenylenediamine, benzyl-aminophenol, p-hydroxyphenylmorpholine and dibenzyl-aminophenol. The rape oil before treatment had d. 0.911, 20°C. viscosity 4.37° E., acid no. 1.62-3.11, Conradson no. 0.32. After treatment the values were, resp., 0.917, 5.31-7.43, 3.11-5.33 and 0.56. Resinification was slight. The increase of acid no. is the most characteristic sign of oil oxidation. The acid no. increased much more in vegetable oils with inhibitors than in mineral oils; mineral oils, however, formed of sediments during oxidation while vegetable oils did not. In practical motor tests vegetable oils, especially rape oil without any inhibitors, increased in viscosity up to 34.0° E. and in acid no. up to 8.06. In presence of inhibitors these increases were to 12.2° E. and acid no. 4.16. A mixt. of 50% mineral oil and 50% rape oil in presence of inhibitors was satisfactory. The consumption of fuel and oil was the same as when mineral oil was used as lubricant.

S. S. de Finckly

ASTM-SLA METALLURGICAL LITERATURE CLASSIFICATION



CA 22

Examination of lubricating oils by means of practical motor experiments. Mihály Freund. *Magyar Tech. 1, 21-4(1946)*.—Expts. made with high-speed Diesel motor showed that deterioration of lubricating oil can be detd. by detg. viscosity, acid no., content of dry asphalt, and change of content of solid matter. Special methods are worked out and recommended for the detn. of these characteristics. Viscosity, sp. gr., acid no., ash content, and content of components separable by  $H_2SO_4$ , of solid asphalt, and of other solids increased with deterioration of the oil, or the time of operation of the motor. Variation of inflammation point showed no regularity. István Fialy

ASB-35.4 METALLURGICAL LITERATURE CLASSIFICATION



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LIST AND 2ND CODES																										PROCESSING AND PROPERTIES INDEX																									
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<p>2A</p> <p>22</p> <p>The Hungarian mineral-oil industry in the last hundred years. Mihály Freund. <i>Magyar Irod.</i> 3, No. 3, 88-90 (1948). Historical. Production in 1947 totaled 509,000 metric tons in county Zala, 281 tons at Bókkazók. István Fényi</p>																																																			
<p>ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION</p>																																																			

22

CA

**Determination of the adhesivity of mineral-oil lubricants.** Al. Freund (Petroleum Research Inst., Budapest). *Magyar Nemzet Közlönyek* 1949, 15 28 in German. A reproducible centrifugal method and app. for detg. the adhesive properties of mineral-oil lubricants on solid surfaces are described. Metal plates were used in the studies. Under given conditions, and with increasing centrifuging time, the amt. of oil adhering to the surface and the thickness of the oil layer reach a limiting value which depends upon the surface properties of the metal and the viscosity of the oil, but is independent of the material of the plates and the chem. compn. of the oil. Fundamentally the detg. property of the oil is the no. of superimposed mol. layers. The surface-tension properties do not play an important role in detg. the strength of the layers.

Felix Saunders

CA

22

The manufacture of synthetic isocyanates by the Fischer-Tropsch and other processes. Mihály Füzessy, László Várkonyi, in: Fokhazkutatás Intézet, Budapest, Magyar Kém. Lapok 5, 304 71(1954). - A summary with 10 references. István Földi



C. A.

Catalytic dehydrogenation of butane. József Varga and Mihály Freund (Univ. Tech. Sci., Budapest, Hung.) *Magyar Kém. Folyóirat* 36, 21-4 (1950). — An exptl. tube furnace was constructed from Cr steel with inner vol. of 1000 ml.; a spiral Cu tube served as the preheater. Both tubes were located vertically and heated by an elec. current to 225-75° (pre-heater), 600-800° (furnace). Butane sepd. from Hungarian natural gas, consisting of butane 81.9, isobutane 15.6, and propane 0.5 vol. %, was introduced at the lower end of the vertical system. Various amts. of a catalyst were used, with  $\text{Cr}_2\text{O}_3$  as the active substance and  $\gamma\text{-Al}_2\text{O}_3$  as the carrier. A medium amt. of catalyst gave the best results; the dehydrogenated gas after 45 min. treatment contained butylene and propylene 23.0, ethylene 0.8 vol. %.

István Fényi

C.A.

22

**Evaluation of lubricating oils for automobile motors.** Mihaly Freund and Istvan Pally (Research Inst. Mineral Oils Nat. Gas, Budapest). *Magyar Kem. Folyóirat* 50, 97 (1950). Lubricating oils of Hungarian, Russian, and American origin and blends obtained by mixing them were oxidized in the lab. by the Polish and British standard methods. Driving tests were also conducted with passenger cars by driving the cars for 2000 km. and investigating the quality of the oil. The results of the lab. tests were identical to those of the driving tests in relation to the properties affecting the condition of motors. A correlation was observed among percentage increase in solid substances (0.37-51%), Conradson no. (0.63-1.31), percentage increase of Conradson no. (0.08-0.1%), and oil consumption (0.30-0.60 kg.). higher nos. showed a deterioration in quality. In the evaluation of lubricating oils of identical viscosity, mol. wt., or av. h.p., a correlation of quality to d. was observed; increasing d. showed a deterioration in quality. I. F.

**Adhesive properties of lubricating oils.** Mihaly Freund (Research Inst. Mineral Oils Nat. Gas, Budapest). *Magyar Kem. Folyóirat* 50, 110 (1950). See C. A. 44, 10032d. Istvan Pally

**MAGYAR TECHNICA**  
**HUNGARIAN ENGINEERING**  
1951  
No. April

*M. Freund:*  
Utilization of cracking gases

ASB S.L.A. METALLURGICAL LITERATURE CLASSIFICATION

Freund, M.

1. The formation of lubricating oil films on metal surfaces (in English) -- M. Freund, *Acta Chimica Academiae Scientiarum Hungaricae* Vol. 3, 1953, No. 1, pp. 1-11, 10 figs.)

The phenomena of adhesion of oil films were studied on metal disks dipped into mineral lubricants and centrifuged at speeds of 5,000 to 30,000 rpm. Experimental data and microphotographs showed that after centrifuging at different speeds the structure and the thickness of the oil films forming in straight oil and in oil containing additives differ under certain conditions.

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"Report on the Mineral (oil) Industry", p. 17, (Vol. 1, No. 1, Vol. 2, No. 10/11, Oct./Nov. 1970, Budapest, Hungary)

CC: Monthly List of East European Accessions (MEM), 10, Vol. 1, No. 3, March 1970, incl.

*Friend, Mihaly*

**New approaches to petroleum refining processes. I. Research on adsorption. Mihaly Freund (Hungarian Petroleum Natural Gas Research Institute, Budapest).**

The adsorption methods were in order to eliminate disadvantages connected with the existing processes. The proposed methods are simple and easily implementable and they are based on the adsorption of components according to their adsorption coefficients. The separation of theoretical components is emphasized.

**Abstract.** The rules governing adsorption are considered. The effect of the adsorbent and the adsorbate on the regeneration of the chromatographic column.

It is shown that from any mixture of heptane and toluene, the toluene component can be separated by adsorption.

The separation of heptane and toluene presents well-defined concentration ranges which are amenable to selective adsorption. From a gasoline-toluene mixture, cyclohexane and heptane, the toluene is preferentially adsorbed at all concentrations. The need for theoretical consideration of the heats of adsorption and of selective adsorption is emphasized. III.

**Separation of aromatics from gasoline by adsorption.** Ervin Kertényi. *Ind. 88-102.*—Two quantitative methods were developed for the determination of aromatic hydrocarbons in petroleum distillates. A micromethod consists in passing the sample through a short silica gel column and comparing  $n_D$  of the original sample and of the first drop of the filtrate which is free from aromatic compounds. In a macromethod a selective solvent having a large adsorptive capacity, such as EtOH, is used and the fractions are identified by  $n_D$ . IV.

**Manufacture of medicinal white oils through cyclic adsorption refining. Prof. Vágnus and Ivan Hadly Kovács.**

The authors describe a new method of refining white oils by cyclic adsorption. The method is based on the use of a special adsorbent which is regenerated by a simple process. The authors emphasize the simplicity and the high efficiency of the method.

**Abstract.** The authors describe a new method of refining white oils by cyclic adsorption. The method is based on the use of a special adsorbent which is regenerated by a simple process.

The authors emphasize the simplicity and the high efficiency of the method. The separation of hydrocarbons by extractive area crystallization is also mentioned.

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FREUND, M.

The processing of Nagyenyel crude oil. Mihalics  
Freund (Hung. Mineral Oil and Gas)

Asphalt 12, paraffin wax 4, S 0.5, and ash 0.03%, of which  
18% is wax. Vacuum gas oil and kerosene from the  
distillation column with a specific gravity of 0.85 and a  
viscosity of 10 cSt at 100°C. Most of the S is present in stable  
emulsion. The products can be increased to 70-80% by raising  
temperature and lowering pressures during distillation and  
refining. The products are: kerosene, gas oil, and  
asphalt.

The higher boiling wax is recovered  
by distillation. The wax can also be recovered. Peter D. Moskov

- Freund, M.

HUNG.

✓ 2034. FIFTH ANNIVERSARY OF FOUNDATION OF HUMANIAN RESEARCH INSTITUTE  
FOR PETROLEUM AND NATURAL GAS. Freund, M. (Eng. Chem. Lab., 1954, vol. 9,  
(1), 3-5; title in Ref. Zh. Khim. (Ref. J. Chem., Moscow), 1954, (13),  
202).

gm



HUNGARY/Chemical Technology - Chemical Products and Their Applications - Natural Gases and Petroleum Processing. Engine and Rocket Fuels. Lubricants. H.

Abs Jour : Ref Zhur - Khimiya, No 11, 1958, 37542  
Author : Freund, M.  
Inst :                       
Title : Aging of Engine Greasing Oils.  
Orig Pub : Magyar tud. akad. kem. tud. oszt. közl. 1955, 6, No 12,  
237-238  
Abstract : No abstract.

Card 1/1

FREUND, MICHAEL

✓ Changes of motor oils during use. Michael Freund.  
(Ugar. Erdöl u. Erdgas Forschungsinstitut, Budapest).  
Erdöl u. Erdgas 8, 712-18 (1955) -- Tests on a 1-cylinder  
diesel engine showed that detergents improved the deposit  
retard but they also increased the sulfur content of the used  
oil. Sulfur was determined by diln. of the used oil with CCl<sub>4</sub>  
and with HCl. The sludge consisted mainly of soot  
formed during combustion of the fuel. High S fuels give  
more engine deposits than fuels of low S content. Micro-  
graphs and electronmicrographs are presented to show the  
dispersion of soot in oil by detergent additives.

O. C. Elmer

JMB. 02/6

FREUND, M.

HUNGARY/Organic Chemistry. Synthetic Organic  
Chemistry.

E-2

Abs Jour: Ref Zhur - Khimiya, No. 8, 1957, 26912 K.

Author : Freund, Mihály; Bathory, Jozsef; Érdi, Niklos.

Inst :

Title : Formation of Adducts with Urea. 4. Preparation  
of Paraffin and Ceresin Under Laboratory and Semi-  
industrial Conditions.

Orig Pub: Budapest, 1955, 11, 114 1.

Abstract: No abstract.

Card 1/1

✓42. Rheologic properties of bitumens. M. Freund.  
In: Vajta, Magyar Kémiai Folyóirat, Vol. 47, 1953,  
No. 9, pp. 277-282, 12 figs., 1 tab.

The rheologic properties of different kinds of domestic bitumens were investigated as a function of the shear velocity and temperature by means of a Höppler type consistometer. Other properties of the domestic bitumen produced by different processes were investigated at the same time (e. g. ageing phenomena, etc.) and the degree of complex flow was determined. It was found that the bitumen originating from Matzen and produced by distillation processes is a pure viscous sol-type modification containing some well-peptized particles in the investigated temperature range of 20 to 90 °C. The bitumen originating from Nagylengyel may be considered as a sol-type bitumen bordering on the gel state in the investigated temperature range. By increasing the distillation temperature these products are converted with moderate velocity to a gel-type structure whereas blowing accelerates this conversion more definitely.

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